

said receiving apparatus comprising:

- a demodulator operable to demodulate the VSB modulated signal to the data stream.

20. A signal transmission apparatus comprising:

- a mapper operable to map a data stream to an n-level mapped signal;
- a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, said filter being operable to filter the n-level mapped signal to produce a VSB modulated signal; and
- a transmitter operable to transmit the VSB modulated signal.

21. A signal receiving apparatus comprising:

- a receiver operable to receive a transmitted VSB modulated signal having information of a data stream, wherein said transmitted VSB modulated signal includes a VSB modulated signal;
- a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, said filter being operable to filter the VSB modulated signal to produce an n-level mapped signal; and
- a demapper operable to demap the n-level mapped signal to the data stream.

22. A signal receiving apparatus according to claim 21, further comprising a video decoder operable to decode the data stream to a video signal.

23. A signal receiving apparatus according to claim 22, further comprising an output part operable to output the video signal.

24. A signal receiving apparatus according to claim 22, further comprising a display operable to display the video signal.

Sub 21
25. A signal transmission and receiving method comprising a transmission method and a receiving method,

said transmission method comprising:

- mapping a data stream to an n-level mapped signal;
- filtering the n-level mapped signal with a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, to produce a VSB modulated signal; and

- transmitting the VSB modulated signal;

said receiving method comprising:

- demodulating the VSB modulated signal to the data stream.

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Contd
26. A signal transmission method comprising:

- mapping a data stream to an n-level mapped signal;
- filtering the n-level mapped signal with a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, to produce a VSB modulated signal; and

- transmitting the VSB modulated signal.

27. A signal receiving method comprising:

- receiving a transmitted VSB modulated signal having information of a data stream, wherein said transmitted VSB modulated signal includes a VSB modulated signal;

- filtering the n-level VSB modulated signal with a filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency, to produce an n-level mapped signal; and

- demapping the n-level mapped signal to the data stream.